

REMARKS

Claim rejections under 35 USC 103

Claims 1, 3-4, 6, 10, and 18 have been rejected under 35 USC 103(a) as being unpatentable over Okubo (4,336,597) in view of Tateishi (5,086,421). Claims 5 and 9 have been rejected under 35 USC 103(a) as being unpatentable over Okubo in view of Tateishi and further in view of Greene (5,805,460). Claims 11-16 have been rejected under 35 USC 103(a) as being unpatentable over Okubo in view of Tateishi and further in view of Ito (5,608,717). Claim 17 has been rejected under 35 USC 103(a) as being unpatentable over Okubo in view of Tateishi and further in view of Anderson (2003/0179674). Claim 24 has been rejected under 35 USC 103(a) as being unpatentable over Tsuji (JP 52080803) in view of Anderson.

Claim 1 is an independent claim, from which claims 3-18 depend. Claim 24 has been cancelled. Applicant submits that at least as amended, claim 1 is patentable over Okubo in view of Tateishi. For at least the same reason, claims 3-18 that depend from claim 1 are patentable. Applicant provides two independent and separate reasons why claim 1 is patentable over Okubo in view of Tateishi. First, all of the limitations of claim 1 are not found in or suggested by Okubo in view of Tateishi. Second, modifying Okubo in view of Tateishi renders Okubo unsatisfactory for its intended purpose. Each of these reasons is now discussed in detail.

Not all limitations of claim 1 are found in or suggested by Okubo in view of Tateishi

The claimed invention is limited to “passing a light source beam over a reflectivity change on a *rotating optical* storage medium,” where the italicized limitations have been added to claim 1 via amendment. The Examiner has found this limitation in column 2, lines 8-15 of Okubo, such that Okubo in view of Tateishi teach, disclose, or suggest all the limitations of the claimed invention. However, Okubo generally, and Okubo in column 2, lines 8-15 particularly, does not teach this limitation of the claimed invention.

Okubo generally “relates to a method and system for measuring the diameter and shape of an electron beam used in such electron beam devices as an apparatus for *electron beam lithography*.” (Col. 1, ll. 5-10) Therefore, in particular, the “specimen 8” disclosed in column 2, lines 8-15 of Okubo is one in which electron beam lithography is performed, presumably within a semiconductor device fabrication process, as to which electron beam lithography is performed. See, for example, the Internet web site http://www.siliconfareast.com/lith_electron.htm, which describes electron beam lithography as a process to “form the circuit patterns needed for material deposition on (or removal from) the [semiconductor] wafer.”

Such a specimen, therefore, is not a rotating optical storage medium. First, the specimen is not disclosed, taught, or suggested by or in Okubo as being a storage medium. Second, the specimen is not disclosed, taught, or suggested in Okubo as particularly being an optical medium. Third, the specimen is not disclosed, taught or suggested by or in Okubo as particularly being a rotating medium. Because the Examiner has particularly relied upon Okubo as teaching this claim limitation in rejecting the claimed invention over Okubo in view of Tateishi, where Okubo does not teach the claim limitation in question, Okubo in view of Tateishi does not teach, disclose, or suggest all the claim limitations of claim 1. For this reason alone, the claimed invention is patentable over Okubo in view of Tateishi.

Applicant notes that all the claim limitations must be taught or suggested by the prior art. In *re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” In *re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Because Okubo in view of Tateishi does not teach, disclose or suggest specifically passing a light source beam over a reflectivity change on a rotating optical storage medium, the claimed invention is patentable over Okubo in view of Tateishi.

Modifying Okubo in view of Tateishi renders Okubo unsatisfactory for its intended purpose

Section 2143.01.V of the MPEP states that “the proposed modification cannot render the prior art unsatisfactory for its intended purpose,” citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). In the present patent application, the Examiner has modified Okubo per Tateishi so that the frequency in question in Okubo is a storage media velocity. This means, then, that the specimen of Okubo – which the Examiner has (incorrectly) correlated as the storage medium of the claimed invention – necessarily has a velocity. Indeed, insofar as the claimed invention now limited to a rotating storage medium, this means that the storage media velocity is non-zero, since it is rotating.

The net effect of modifying Okubo in view of Tateishi in this manner is that the specimen of Okubo becomes a rotating specimen that has a non-zero velocity. This is required, because otherwise there would be no storage media velocity in the resulting combination of Okubo in view of Tateishi. That is, in order to modify Okubo in view of Tateishi so that the resulting combination can use the storage media velocity of Tateishi in lieu of the frequency of Okubo to yield the claimed invention, the specimen in Okubo that has been (incorrectly) correlated as the storage medium of the claimed invention has to have this velocity, and thus has to be moving – and in particular has to be rotating, as in the claimed invention.

Such a modification of Okubo in view of Tateishi, however, renders Okubo unsatisfactory for its intended purpose. As has been noted above, Okubo relates to electron beam lithography, where, as described in the Internet web site referenced above, an electron beam is used to form the circuit patterns needed for material deposition on or removal from a semiconductor wafer. In electron beam lithography, however, the specimen/semiconductor wafer remains stationary at all times – it is never moved or rotated while electron beam lithography is taking place. Applicant is unaware of any type of electron beam lithography in which the specimen/semiconductor wafer is moving – and specifically is rotating – while the electron beam lithography is taking place. Applicant, indeed, asserts that at the time of the present invention, such electron beam lithography

did not exist (and still does not exist) and was impossible (and still is impossible), such that rotating or moving the specimen in Okubo during electron beam lithography, as required by modification per Tateishi, means that Okubo could not be able to be used for its intended purpose – electron beam photolithography.

Stated another way, if you modify Okubo so that its specimen is rotated per Tateishi, then you can no longer perform electron beam lithography. Insofar as Okubo is concerned with adjusting the electron beam used in such electron beam lithography, the net effect of the proposed modification to Okubo is that you would have an inoperable and non-working electron beam lithography setup, contrary to the intended purpose of Okubo. Thus, modifying Okubo per Tateishi results in Okubo no longer being able to perform electron beam lithography, such that Okubo cannot be combined with Tateishi to render the claimed invention obvious. Therefore, claim 1 is patentable under 35 USC 103(a) over Okubo in view of Tateishi.

Applicant respectfully submits that if the Examiner wishes to continue to rely on Okubo in combination with Tateishi to render the claimed invention obvious, he needs to provide a reference indicating that, at the time of the present invention, electron beam lithography could have been performed in relation to a rotating specimen/semiconductor wafer such that it has a (non-zero) velocity. As noted above, Applicant is unaware of any type of present-day electron beam lithography in which the specimen/semiconductor wafer rotates, let alone any such type of electron beam lithography that was available on August 29, 2003, the filing date of the present patent application. Without such a showing, Okubo cannot be modified per Tateishi without rendering it unsatisfactory for its intended purpose, as has been described.

Conclusion

Applicants have made a diligent effort to place the pending claims in condition for allowance, and request that they so be allowed. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Mike Dryja, Applicants' Attorney, at 425-427-5094, so that such issues may be resolved as expeditiously as possible. For these reasons, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



Michael A. Dryja, Reg. No. 39,662
Attorney/Agent for Applicant(s)

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Law Offices of Michael Dryja
704 228th Ave NE #694
Sammamish, WA 98074
tel: 425-427-5094
fax: 206-374-2819